REMARKS

Applicant thanks the Examiner for acknowledgment of a claim for foreign priority under 35 U.S.C. §119 and indication that certified copies of the priority documents have been received by the Office.

The specification has been carefully reviewed and amended to correct minor grammatical errors. No new matter is presented by this amendment.

An indication that claims 7, 27 and 38 are drawn to the allowable subject matter is also noted with appreciation. Claims 7, 27, and 38 have now been revised to independent claim form, and include all of the features of the base claims from which they depended. Furthermore, in order to address the rejection of claims 7 and 27 under 35 U.S.C. 112, second paragraph, revisions to the grammar used in the body of claims 7 and 27 have been made. In view of the above, claims 7, 27, and 38 are now in immediate condition for allowance.

Apparatus claims 1, 5, 13 have been amended to emphasize specific features of the present invention. The support for this amendment can be found at least in Figures 1 and 4 and on page 22, lines12-14 of the present specification. No new matter is introduced by this amendment. Furthermore, it is noted that in the present invention (1) the image coder converts only the head group which is arranged on a head of an editing target area, and (2) the image coder converts closed groups (closed GOPs) including a third frame (a B picture) to groups (GOPs) including no third frame (B picture). In view of this, new claims 40 and 41, which generally correspond to claims 1 and 5, have been added to the application. With regard to the first feature (1), Setogawa et al. (U.S. Patent 5,822,024) do not discloses any means for detecting the head group. As such, Setogawa does not discloses any means for converting only the head group. As for the second feature (2), Setogawa disclose that the image coder converts the closed group, but the converted closed group still includes B pictures as shown in Fig. 11. In the system disclosed in Setogawa, the converted group includes not only the I picture and the P picture, but also the B picture. According to this

structure, the quality of the converted group is still low. According to the present invention, the converted group does not include any third frame or B picture. Therefore, even the original group which is arranged at head position in the editing target area includes third frame (B) picture, and the quality image can be obtained.

Claims 1-6, 8-9, 11-23, 26, 28-29, 31-37, and 39 have been rejected under 35 U.S.C. §102(b) as being anticipated by Setogawa (U.S. Patent 5,822,024). This rejection is respectfully traversed based on the following discussion.

The present invention provides an image editing apparatus which edits data coded by a MPEG method. Generally referring to Figure 1 of the Applicant's disclosure, the claimed apparatus includes an image encoder 7, which codes the image data, an image decoder 6 which decodes the coded image data, and an image data analyzer 5 which determines an attribute of each GOP and a type of each image frame. The image data analyzer determines whether **a head GOP** of an area to edited is a closed GOP or not. In a case where the image data analyzer determines that the head GOP is not a closed GOP, the image encoder converts a portion near the head of the area to be edited into a closed GOP. This helps to resolve the problem of a video picture quality which a rises due to the fact that in the case of concatenating two image data, a B-picture, arranged near the head portion of a GOP which appears immediately after a GOP arranged at the head of the latter data of the two image data, cannot be decoded, and thus a "broken link" flag stands for the GOP second to the head GOP. This is because when the picture arranged at the concatenating portion of the head GOP of the latter data and all the pictures following this picture are recompressed, the last P-picture included in the head GOP of the latter data and all the pictures following this picture are recompressed, the last P-picture included in the head GOP becomes different from the original last P-picture. Additionally, in case where the data to be edited is cut out from the whole MPEG video data from a picture arranged in the middle of a GOP, this GOP cannot properly be expanded for the reason that a P-picture and a B-picture in a GOP refer to an I-picture or a P-picture which has not been

recompressed into an I-picture.

The patent to Setogawa et al. aims to resolve a characteristic problem for MPEG standard coded pictures, wherein it is not possible to edit freely each individual frame. In order to overcome this disadvantage Setogawa et al. proposes an image data processing method for pictures, coded as I-pictures, P-pictures and B-pictures accommodated in GOPs (Group of Pictures), characterized in that when the pictures of a certain GOP among a series of GOPs are changed such way that the coding is performed replacing the first picture of the sequence of the changed pictures of the GOP with an I-picture of a picture number prescribed in accordance with the position of change so that coding is possible without existence of a picture in the preceding GOP. When the pictures are changed, the new GOP starts from an I-picture, so the picture of the preceding GOP is not required. The basic concept of the invention to Setogawa et al. resides in usage of Edit Decision List (EDL). In the editing process, the editing points are not selected at random for no purpose. According to Setogawa et al. the editing points determined are put together in a list referred to as an Edit Decision List (EDL) which is supplied to the editing machine which actually performs the editing operation. This feature allows to Setogawa et al. avoid use of a "closed GOP" or "broken Link" provided in the GOP header. The concept of a cut based on the EDL is used, an I-picure is placed at the start of the GOP before this and the GOP having a cut are made independent, whereby the characteristic of the MPEG standard is maintained even by editing of the pictures and coding the result, not causing a reduction in the image quality.

In making the rejection the Examiner totally ignores a conceptual difference between the claimed invention and patent to Setogawa et al. As it is shown through the Applicant's disclosure, the claimed invention performs editing by creating closed GOPs based on analyzing and changing a GOP header, which is the different way as it is done by the reference to Setogowa et al.. The claimed method is totally based on analyses of a head GOP and generating of closed GOP information. It seems to be useful to show what is a header of a GOP. This

function of MPEG standard is shown in the book ***MPEG Video Compression Standard*** edited by Joan L. Mitchell , William B. Pennebaker, Chad E Fogg and Didier J. LeGall, published by International Thomson publishing in 1997. (A copy of the cited pages is included for the Examiner's reference). On pages 198-199 and 202, the authors show syntax and explain the MPEG function named as "GOP Header". It should be respectfully noted that the reference to Setogawa et al. clearly states that, " ...no use is made of a "close GOP" or "broken Link" provided in the GOP header."(See Column 18, lines 9-10). In contrast, the patent to Setogawa et al. does not use header function at all but uses a cut function based on the Edit Decision List (EDL). The conceptual differences of the claimed invention and Setogawa et al. make them different structurally. Despite to the Examiner's statement that the Applicant's claimed Video Data Analyzer 5 (See Figure 1 of the present disclosure) and the Cut Decision Circuit 169 of Setogawa et al. (see Figure 13) are analogous structures, it should be respectfully noted that they perform absolutely different operations. The Video Data Analyzer 5 analyzes a GOP header of a head frame in the area to be edited and gets information representing a picture type, and determines the picture type of the frame. Based on results of this analyses the different processes of editing routine can be applied. However, the Cut Decision Circuit 169 of Setogawa et al. receives the information on the editing points from Edit Decision List and time delay from Video Tape Reproducing Apparatus 172 and on that base it makes a decision on what kind of compression sequences should be assembled considering the input editing point information and prepares a list of the correspondence between each frame number of the time code 170 input and the sequence of pictures. As it can be seen there is no GOP header analyses in the Setogawa et al. and therefore the Video Data Analyzer 5 and Cut Decision Circuit 169 are different.

To emphasize the distinction, the limitation of a Video Data Analyzer has been expended in the apparatus claims 1, 5 and 13. In regard to the method claims, the Applicant is respectfully submits that they define over of Setogawa et al. For instance, in the method claim 19 is clearly shown the Applicant's approach

to deal with GOP headers which is not a part of Setogawa method et al. : "...

determining whether a head group which is arranged at a head of the editing target area is a closed group which is a group that does not include the third type image frame which is to be decoded by referring to an image frame included in a group which is arranged before the head group; and

converting a portion near the head of the editing target area into the closed group in a case where said determining determines that the head group is not the closed group." (Emphasis added)

Thus, as amended it is respectfully submitted that the claims 1-6, 8-9, 11-23, 26, 28-29, 31-37 and 39 clearly define over the patent to Setogawa et al.

Furthermore, MPEP 2131 mandates that "TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT IN THE CLAIM". Furthermore, the MPEP, citing *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1051, 1053 (Fed. Cir. 1987), states "[t]he identical invention must be shown in as complete detail as is contained in the ...claim" (emphasis added).

Here, none of the structural limitations highlighted in Applicant's claims above are taught or suggested by Setogawa et al. It is therefore respectfully submitted that the rejections to the claims are improper under 35 U.S.C. §102 as Setogawa et al. cannot anticipate the rejected claims since it does not "teach the identical invention". Further, since the above limitations are not taught or suggested, Setogawa et al. cannot be used to support a *prima facie* obviousness rejection under 35 U.S.C. §103. Based on the above discussion with reference to the MPEP guidelines, it is respectfully requested that the rejection based on 35 U.S.C. §102 be withdrawn.

Claims 24 and 25 have been rejected under 35 U.S.C. §103(a) as being unpatentable over patent to Setogawa (U.S. Patent 5,822,024). This rejection is respectfully traversed for the reason that Setogawa eta l. neither shows nor suggests the invention as presently claimed.

As it was discussed above, the reference to Setogawa et al. cannot be used to support a prima facie obviousness rejection due to the conceptual differences

with the claimed invention. Claims 24 and 25 are dependent from the claim 22, which claims: " .... determining whether a head GOP which is arranged at a head of each of the one or more editing target areas is a closed GOP;

determining a picture type of a head image frame which is arranged at the head of each editing target area;

detecting a GOP which needs to be re-coded, and an image frame which is included in the GOP and needs to be re-coded in accordance with a result of said determining whether a head GOP of each editing target area is a closed GOP, and a result of said determining a picture type of a head image frame of each editing target area; and

re-coding the detected image frame which needs to be re-coded, after it is decoded." (emphasis added) As it was discussed earlier, a head GOP approach is not shown by the patent to Setogawa et al. Therefore, the Examiner is respectfully requested to reconsider the application in a view of the present amendment and withdraw the rejections.

Additionally, claims 10 and 30 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Setogawa et al. (U. S. Patent 5,822,024) in view of Sasaki (J.P. - 08205174A). This rejection is also respectfully traversed.

The reference to Setogawa et al. has been distinguished above. The Examiner relied on Japanese Patent to Sasaki as noted on page 6, paragraph 4 of the Office Action. However, the Examiner in the discussion on page 7, does not cite Sasaki, but mentions Takayuki without referring to patent number. The Applicant finds this argument confusing and assumes that the inclusion of references of Sasaki or Takayuki is in error. Therefore, it is respectfully submitted that if in the future action these references will be used, such action should not be made final.

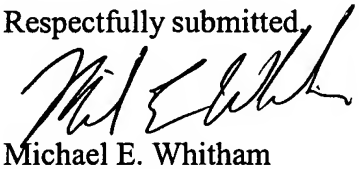
In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1 to 41 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for

allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041 (Whitham, Curtis & Christofferson, P.C.).

Respectfully submitted,



Michael E. Whitham
Reg. No. 32,635

Whitham, Curtis & Christofferson, P.C.
11491 Sunset Hills Road, Suite 340
Reston, VA 20190
Tel. (703) 787-9400
Fax. (703) 787-7557
Customer No.: 30 743